

What is claimed is:

1. A polymer-treated substrate comprising a substrate having associated thereon a polymer composition comprising a polymer having at least one mole percent of one or more amide monomer units, wherein said amide monomer(s) is free of amine linkages in the side chains.
- 5 2. The polymer-treated substrate of claim 1 wherein said amide monomer has at least one amide moiety in the polymer backbone, in the polymer side chains, or a combination thereof.
3. The polymer-treated substrate of claim 2, wherein when the amide moiety is in the side chain then the monomer is free of amine linkages.
- 10 4. The polymer-treated substrate of claim 1 wherein said amide is a mono- or di-substituted amide.
5. The polymer-treated substrate of claim 1 wherein said amide comprises N,N dimethylacrylamide, N,N diethylacrylamide, N-isopropylacrylamide, acryloyl morpholin, or a mixture thereof.
- 15 6. The polymer-treated substrate of claim 1 wherein said substrate is selected from the group consisting of glass, metal, wood, ceramic, plastic, textile, fabric, leather, fiber glass, cement, dishware, silverware, flooring, tile, concrete, paper, and fiber-board.
7. The polymer-treated substrate of claim 1 wherein said polymer composition comprises at least 30 percent by weight of water.
8. The polymer-treated substrate of claim 1 wherein said polymer is an amide homopolymer.
9. The polymer-treated substrate of claim 1 wherein said polymer comprises at least 5 mole percent 20 of one or more amide monomer units.
10. The polymer-treated substrate of claim 9 wherein said polymer is a copolymer comprising at least 10 mole percent of one or more amide monomer units.
11. The polymer-treated substrate of claim 10 wherein said polymer comprises at least 25 mole percent of one or more amide monomer units.
- 25 12. The polymer-treated substrate of claim 11 wherein said polymer comprises at least 40 mole percent of one or more amide monomer units.
13. The polymer-treated substrate of claim 12 wherein said polymer comprises at least 50 mole percent of one or more amide monomer units.
14. The polymer-treated substrate of claim 13 wherein said polymer comprises at least 60 mole 30 percent of one or more amide monomer units.

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15. The polymer-treated substrate of claim 14 wherein said polymer comprises at least 25 mole percent of one or more non-amide monomer(s).
16. The polymer-treated substrate of claim 1 wherein said polymer comprises at least one anionic monomer.
- 5 17. The polymer-treated substrate of claim 16 wherein said anionic monomer is selected from the group consisting of carboxylic acids, di-carboxylic acids, sulfonic acids and phosphonic acids.
18. The polymer-treated substrate of claim 1 wherein said polymer comprises from 1 to 50 mole percent of one or more hydrophobic monomers.
19. The polymer-treated substrate of claim 1 wherein said polymer comprises from 0.1 to 20 mole percent of at least one hydroxy alkyl urea monomer.
20. The polymer-treated substrate of claim 1 wherein said polymer composition further comprises from 5 to 70 percent by weight of at least one surfactant.
21. The polymer-treated substrate of claim 1 wherein said polymer composition further comprises one or more ingredients from the group consisting of surfactants, builders, ion exchangers, alkalies, anticorrosion materials, antiredeposition materials, optical brighteners, fragrances, dyes, chelating agents, enzymes, whiteners, brighteners, antistatic agents, sudsing control agents, solvents, hydrotropes, bleaching agents, perfumes, bleach precursors, water, buffering agents, soil removal agents, soil release agents, softening agents, opacifiers, inert diluents, buffering agents, corrosion inhibitors, graying inhibitors, stabilizers, humectants, anti-microbial agents, and fungicides.
- 20 22. A method to protect a substrate from environmental factors comprising:
  - a) forming a protective composition comprising a polymer composition, said polymer composition comprising a polymer having at least one mole percent of one or more amide monomer units, wherein said amide monomer(s) is free of amine linkages; and
  - b) contacting said protective composition with a substrate.
- 25 23. The method of claim 22, wherein said protective composition is applied to said substrate by means of spray, immersion, brushing.
24. The method of claim 22 wherein said protective composition is aqueous-based.
25. The method of claim 22 wherein said protective composition is formulated as a laundry detergent, a dishwasher detergent, a fabric softener, a rinse aid, an anti-wrinkle spray, a hard-surface cleaner/ disinfectant, a personal care product, a water-treatment, a concrete additive, or a metal-working fluid.